

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>50.450PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 00/29657</b>	International filing date (day/month/year) <b>27/10/2000</b>	(Earliest) Priority Date (day/month/year) <b>28/10/1999</b>
Applicant <b>MINIMED, INC.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

#### 1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :
  - contained in the international application in written form.
  - filed together with the international application in computer readable form.
  - furnished subsequently to this Authority in written form.
  - furnished subsequently to this Authority in computer readable form.
  - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
  - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2.  Certain claims were found unsearchable (See Box I).

3.  Unity of invention is lacking (see Box II).

#### 4. With regard to the title,

- the text is approved as submitted by the applicant.
- the text has been established by this Authority to read as follows:

PLUNGER PLUG WITH STIFFENING INSERT

#### 5. With regard to the abstract,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

#### 6. The figure of the drawings to be published with the abstract is Figure No.

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.

14  None of the figures.

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**Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)**

A piston comprises a first member (1404) and a second member (1201). The first member (1404) has an external proximate side and an external distal side. The external proximate side is adapted to contact the fluid and is made of a material having a first stiffness. The second member (1201) has a first side and a second side and is at least partially disposed within the first member (1404). The first side of the second member (1201) is adjacent to the external proximate side of the first member (1404) and is made of a material having a stiffness which is greater than the first stiffness.

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### Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

**1. Claims: 1-36**

Plunger plug with stiffening member.

**2. Claim : 37**

Method of terminating power to a pump motor when a force exceeds a certain value.

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61M5/315

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2 547 201 A (VILLETTE ALAIN) 14 December 1984 (1984-12-14)	1-5, 7-10, 34
Y	the whole document	6, 20, 25-29, 35, 36
Y	US 1 540 126 A (HEIN GEORGE N) 2 June 1925 (1925-06-02) page 1, line 2-105; figures 1-3	6
Y	US 5 947 935 A (HITCHINS MARK W ET AL) 7 September 1999 (1999-09-07) abstract; figure 1	20, 25-29, 35
Y	US 5 735 825 A (BACKMAN DARRYL KENT ET AL) 7 April 1998 (1998-04-07) abstract	36
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 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

6 June 2001

13.06.01

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 10032 A (COEUR LAB INC) 4 March 1999 (1999-03-04)  abstract; figures 19,22 ---	1,3,4,7, 8,10,20, 25, 27-29, 34-36
X	FR 2 750 961 A (AUBERT GUY) 16 January 1998 (1998-01-16) the whole document ---	1,2,4,5, 7-9,34
A	US 4 568 335 A (SHULTS MARK C ET AL) 4 February 1986 (1986-02-04) abstract column 6, line 50-65; figure 3 ---	1,25,34
A	US 4 498 904 A (TURNER ROBERT C ET AL) 12 February 1985 (1985-02-12) abstract ---	1,25,34
A	US 4 710 179 A (HABER TERRY M ET AL) 1 December 1987 (1987-12-01) abstract ---	1,25,34
X	US 4 652 260 A (FENTON JR PAUL V ET AL) 24 March 1987 (1987-03-24) abstract column 8, line 15-23 column 9, line 62-66 ---	37
X	US 5 647 853 A (HENNING CRAIG M ET AL) 15 July 1997 (1997-07-15) abstract column 5, line 17-38 ---	37
X	US 4 838 857 A (STROWE ROBERT J ET AL) 13 June 1989 (1989-06-13) column 7, line 50 -column 8, line 10 ---	37
X	US 5 244 461 A (DERLIEN MICHAEL L) 14 September 1993 (1993-09-14) abstract; claims 1-3 -----	37

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
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Patent document cited in search report	Publication date	Patent family member(s)			Publication date
FR 2547201	A 14-12-1984	NONE			
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US 5947935	A 07-09-1999	US	5873861 A	23-02-1999	
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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

PCT/US 00/29657

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